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Worldwide Report

EPIDEMIOLOGY No. 320



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WORLDWIDE REPORT EPIDEMIOLOGY

No. 320

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EPIDEMIOLOGY OF BACTERIAL DYSENTERY IN ALGERIA

Moscow ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII in Russian No 3, Mar 83 pp 49-53

[Article by V. V. Shkarin, A. Ushfun, V. I. Minayev, and D. Naser, of the National Institute of Health, Algeria: "Epidemiology of Bacterial Dysentery in Algeria. Communication 1. Some Epidemiological Aspects of Dysentery in Algeria"]

[Text] Up until the present, there have been no systematic generalizations of the many years of data covering questions of the epidemiology of bacterial dysentery in Algeria. Separate publications [1,4,5,7,8,9,12] do not reflect the epidemiological aspects of the disease. Bacterial dysentery accounts for 4.5 percent of the country's infectious pathologies over recent years (not including flu and simultaneous increase in morbidity). Taking into account the urgency of this problem, we studied a number of epidemiological parameters of dysentery to clarify the etiological pattern of its pathogens. We utilized statistical materials on morbidity from 1963 on and data from bacteriological laboratories. A summary of the results from the last 20 years is shown in table 1, with the primary infectious agents being Shigella flexneri (71.08 percent), S. sonnei (20.10 percent), S. boydii (4.32 percent), and S. dysenteriae (4.50 percent). Between 1970 and 1975, 6 strains of S. dysenteriae were isolated. Starting in 1976, this subspecies was no longer distinguished in this country. It should be noted that there has been a tendency for the proportion of S. flexneri to decline and that of S. sonnei to increase. In the period between 1960 and 1969, S. flexneri accounted for 76.9 percent in the etiology of dysentery, and S. sonnei accounted for 11.4 percent. Between 1979 and 1980, S. flexneri was responsible for 60.59 percent of the morbidity due to dysentery, and S. sonnei was responsible for 29.06 percent. The proportion of the other bacterial agents of dysentery did not change significantly. The results that have been obtained coincide on the whole with data in neighboring countries (Morocco and Tunisia) and in other African countries (the Ivory Coast, Senegal, the Congo), where S. flexneri plays the major role in the etiology of dysentery [2,3,6,10,11].

Of the serological types of S. flexneri, subtype 2 is distinguished most often (59.1 percent); subtype 1 comprises 18.2 percent; subtype 3--14.1 percent; subtype 6--8.2 percent. Among S. boydii, subtype 2 is predominant. Biochemical types of S. sonnei have not been distinguished in this country, with a

few rare exceptions. A somewhat different distribution of the serological subtypes of S. flexneri has been observed in another African country, the Ivory Coast: subtype 1--12.7 percent; subtype 2--36.3 percent; subtype 4--29.7 percent [2].

Taking into account the data of worldwide statistics and the tendency that has been noted in the changing ratios of the infectious agents in Algeria and other African countries [10], predictions can be made about further increases in the morbidity due to S. sonnei with a decrease in morbidity due to S. flexneri.

Table 1 Etiological Pattern of Infectious Agents of Dysentery in Algeria

Years	Total no. of strains	S. fle				-		S. dyse	
7 0 0 2 0	or serarus	ar cau		ac caar	70 0	ccuar		actual	-79
1960-196	59 446	343	76.9	50	11.4	15	3.36	38	8.52
1970-197	75 653	477	73.05	112	17.15	33	5.05	31	4.74
1976-197	78 897	620	69.12	221	24.64	34	3.79	22	2.45
1979-198	30 203	123	60.59	59	29.06	13	6.40	8	3.95
Total	2199	1563	71.08	442	20.10	95	4.32	99	4.50

Of the 843 cases studied in 7 areas of the country, dysentery was confirmed bacteriologically in 199 (23.6 percent) patients. According to data from different laboratories bacteriological confirmation ranged from 3.6 to 85.0 percent.

According to data summarizing the period between 1960 and 1980, among the 63,313 people investigated the infectious agent was found in a very small number--1461, or 2.29 percent. The highest indicators are those for 1960-1962 and 1967-1969 (6.61 and 9.14 percent, respectively). The lowest indicators are those for 1976-1978 and 1979-1980 (1.35 percent and 3.27 percent, respectively). Up until 1974 bacteriological investigations in the country were conducted only on patients, which resulted in the higher results for finding the infectious agent. In the following years, 50-55 percent of the bacteriological research was conducted according to epidemiological evidence, which was promptly reflected in the frequency with which the infectious agent was found. One of the primary reasons for the low percentage of shigellae isolated from patients is the long-standing habit of taking material after antibiotic treatment has been initiated.

Indicators of morbidity for bacterial dysentery in Algeria compared to neighboring African countries and some Mediterranean countries are on the whole much lower. If morbidity in Algeria between 1973-1976 per 100,000 people ranged between 5.7 and 16.1, in Mali it was between 127.8 and 303.3; in Chad it was between 306.0 and 1043.8; in Mauritania it was between 805.1 and 1276.4. An especially low morbidity for dysentery was recorded in Algeria in 1975. Over the following 5 years, there was a steady trend toward an increase in the morbidity. The indicator for 1981 shows an increase by a factor of 8 over the 1974 level, and the 1970 level shows an increase by a factor of 16.4 (table 2).

Table 2 Bacterial Dysentery Morbidity in Algeria

	Number o	of People Ill		Number	of People Ill
Year	Actual	Per 100,000	Year	Actual	Per 100,000
1963	140	1.27	1973	860	5.66
1964	796	6.71	1974	1069	6.79
1965	867	5.82	1975	2544	15.69
1966	635	5.21	1976	2689	16.09
1967	1514	12.13	1977	2910	16.89
1968	792	6.1	1978	3021	17.02
1969	699	5.22	1979	5786	31.62
1970	452	3.27	1980	5535	29.34
1971	671	4.7	1981	10,299	54.33
1972	549	3.73		•	

Is this growth a statistical phenomenon or is it an actual increase in the number of cases? Most likely, the increase in morbidity is a result of gradual improvements in the system of declaring and recording cases of dysentery. The system of declaring and recording cases of infectious diseases, including dysentery, is still not efficient enough, however.

Morbidity due to dysentery is distributed unevenly throughout the country. The indicator per 100,000 people ranges in a number of areas from 0.8 to 1997 and depends on how completely the cases are recorded. The country is clearly divided into 3 climatic and geographical zones: the Maritime, High Plateau and Sahara. The Maritime zone covers the area of the 11 coastal regions where 50.9 percent of the country's population is concentrated. The average population density is 189.8 people per square kilometer. The rural population accounts for 49.5 percent.

There are 14 regions in the High Plateau zone and 41.16 percent of the population lives here. The average population density is 29.35 people per square kilometer. The rural population accounts for 53.5 percent.

The Sahara zone includes 6 regions, with 8.9 percent of the population. The average population density is 0.73 person per square kilometer. The rural population accounts for 50.35 percent and this group basically has a nomadic lifestyle.

Proceeding from the drastic climatic and geographical differences of the zones and the peculiarities of social order associated with them, it was advisable to study morbidity according to zone. Morbidity was also studied according to three regions of the country: the western, central and eastern, without including the Sahara regions.

Between 1963 and 1974 the differences in the morbidity indicators for the climatic and geographical zones are insignificant (table 3).

The period between 1975 and 1980, when compared to the preceding period, is marked by a sharp increase in morbidity. The Sahara zone has the highest

indicator--40.2 The indicator for the High Plateau zone is 25.5, and for the Maritime zone, 14.3. There is a clear difference in the rate of increase in according in the various zones. In the Maritime zone, morbidity increased by a factor of 2.7 over a 6-year period compared to the figures for 1961-1974; in the Hill Plateau zone there was a 5-fold increase; and in the factor of 5.4.

An analyll of the normidity in the next three regions of the country (western, central, and astern also reveals some substantial differences in the indicators (table 3). This is especially evident in the eastern region. For the 1963-1974 period, the average annual morbidity indicator in the eastern region was three times treater than in the central and western zones. The average annual indicator for 1975-1980 in the east (42.9) was 2.8 times higher than the indicator for the link attribute for the west (15.8), and 5.4 times higher than the indicator for the link attribute in 1975-1980 compared to the 1963-1974 period is found in the west (almost a 5-fold increase). In the eastern part of the country dysentery morbidity increased by a factor of 4.3 and in the central regions by a factor of 2.3. It is still difficult to provide an exhaustive explanation for the higher dysentery morbidity in the eastern part of the country. This requires special research to determine the leading factors influencing the intensity of the epidemic process of dysentery in the given region.

Table 3 Thysentery Murbidity According to Various Regions of the Country

	196	3-1974	1975-1980			
Zon	ictua.	Average Annual No. per 100,000 People	Actual	Average Annual No. per 100,000 People		
Western	1024	3.15	4751	15.83		
Central	2688	3.53	3301	7.85		
Eastern	4312	9.94	10,648	42.93		
Maritime High	5679	5.33	7660	14.32		
Plateau	2345	5.14	11,040	25.45		
Sahara	715	7.14	3371	40.16		

Just as in other countries, the dysentery morbidity among the urban population is considerably higher than among the rural population. It is clear that the people's living conditions, water supply, sewer system, way of life, and the nature of contact between people in cities and rural areas play an important role in the diffence between the morbidity indicacors.

The fundamental factors in the transmission of infection are water and food-stuffs. Elecidation of these factors in one area of the country showed that water was the means of communication in 56 percent of the cases and 24 percent of the illnesses were tied to the use of infected foodstuffs. Evidence of the role of water in the transmission of dysentery is found in the systematically high percentage (26-36) of abnormal analyses of coli-titers done on water from pipes and wells over the course of an entire year. In a number of places the sewer system is located right alongside the water supply. Water

from pipes and wells has often been found to contain cholera, typhoid fever and dysentery infectious agents, as well as other pathogens. At the same time, residual chlorine was found in only 16 percent of the tests on pipe water and in 1.2 percent of the tests on well water.

Laboratory data provide evidence of the role of foodstuffs in the communication of dysentery infections. Fecal contamination was found in 50-96 percent of the tests on confectionery items, in 50-94 percent of the tests on milk and dairy products, and in 30-40 percent of the tests on soft drinks. Salmonella, including S. typhi, was found a number of times in the milk. Pathogenic staphylococcus and proteus were found in 25-30 percent of the tests on milk and in 30-40 percent of the tests on meat.

Males comprise 53.1 percent of those suffering from dysentery. The proportion of males in two age groups is somewhat higher: in the 40-49 age group it is 57.1 and in the 50-59 age group it is 55.7 percent. Females are predominant in two age groups: in the 11-14 group they account for 54.0 percent and in the 15-19 group they account for 54.3 percent.

Among those suffering from dysentery, children in the first years of life typically predominate. They account for 27.3 percent of all the recorded cases (table 4).

The morbidity indicator for every 100,000 children under the age of 2 is 101.25 and is 3 times higher than the average annual indicator of all age groups combined. The lowest indicators are found among children 7-10 and 11-14 and among adolescents 15-19 years old (17.17, 17.41 and 15.34, respectively). Morbidity indicators for the 20-29, 30-39 and 50-59 age groups show practically no significant differences (they are within the range of 23.5-27.8). The morbidity among people 40-49 years old and those 60 years and older is somewhat higher (35.99 and 31.97, respectively).

Table 4 Distribution of Dysentery Among Different Age Groups

Age in Years	Number of Cases	Percentage of Total Cases	Number per 100,000 People
Under 2	1516	27.39	101.25
2-6	874	15.79	28.15
7-10	396	7.15	17.07
11-14	317	5.75	17.41
15-19	297	5.36	15.34
20-29	588	10.62	23.5
30-39	471	8.49	26.81
40-49	460	8.32	35.99
50-59	254	4.59	27.82
60 and ove	er 362	6.54	31.97
Total	5535	100	29.35

In order to determine the breeding pattern of dysentery, materials were obtained from epidemiological research conducted at 1753 infection sites, with 1884 cases of the disease recorded (the breeding coefficient here is 1.08). At 1646 sites (93.9 percent), there was 1 case recorded; at 88 sites (5.0 percent) there were 2 cases recorded; at 15 sites (6.8 percent) there were 3 cases recorded; at 3 sites (0.2 percent) 4 cases were recorded; and at 1 site (0.06 percent) there were 5 cases recorded. Large outbreaks of dysentery are fairly rare in this country.

In order to determine the level of hospitalization, data on 4824 people suffering from dysentery were analyzed; of this group, 1801 were hospitalized (39.3 percent); 908 people (47.9 percent) were hospitalized in the first 3 days of the illness; 631 (33.2 percent) were hospitalized on the fourth or fifth day; and 362 (18.9 percent) were hospitalized on the sixth day or later. These time periods can be explained by the fact that those suffering from dysentery seek medical help after some delay. The majority of those hospitalized are children who are seriously ill. Length of treatment in the hospital is 4-6 days with a bacteriological analysis done on the patient once. Control analyses upon discharge of a patient are not done, as a rule.

In spite of the relatively powerful arsenal of medicines that are available, the lethality of dysentery remains quite high in Algeria; and there are large fluctuations in the lethality indicators for different areas of the country in different years: in 1977 the range was 1.6 to 15.3 percent, with an average for the country of 7.54 percent; in 1978 the range was 2.3 to 17.6 percent, with an average of 6.48 percent; in 1979 the range was 0.9 to 32.0 percent, with an average of 7.27 percent; in 1980 the range was 0.7 to 5.9 percent with an average of 2.91 percent. The relatively high indicators for the lethality of dysentery in our opinion can be explained basically by two factors. The first factor is statistical. If the hospitalized people suffering from dysentery are all included in the official statistics, as a rule, then a significant number of those who were not hospitalized are not included. In the overwhelming majority of cases, those who are hospitalized are suffering from severe forms of the illness, and this group naturally has a higher percentage of lethal outcomes. The second factor is tied to late hospitalization and medical attention, which results in later specific treatment. In the group of hospitalized patients that was studied, of those who entered the hospital in the first 3 days, 1.7 percent had lethal outcomes; of those who entered the hospital on the fourth or fifth day, 2.8 percent had lethal outcomes; and among those with the latest hospitalization, lethality reached 7.7 percent.

Conclusions

- 1. In the etiological pattern of infectious agents of dysentery, there is a trend toward a gradual increase of S. sonnei. However, S. flexneri is predominant in the data for 1979-1980, as before.
- 2. Dysentery morbidity is distributed unevenly throughout the country. The highest indicators are found in the Sahara and in the eastern part of the country. Morbidity among the urban population is significantly higher than among the rural population. Dysentery is recorded primarily in isolated cases.

- 3. The dysentery morbidity indicator is high among children under 2 years old. It is 3 times higher than the average annual indicator for all the age groups combined.
- 4. Those suffering from dysentery are hospitalized primarily according to clinical signs. Over half of the patients enter the hospital 4 or more days after the onset of the illness. The length of the hospital stay ranges from 4-6 days with a single bacteriological analysis of the patient.
- 5. The lethality of dysentery remains at a fairly high level and over recent years has ranged from 2.91 to 7.54 percent.
- 6. The study of different epidemiological parameters of dysentery makes it possible to go into greater depth and take a differentiated approach to the development of measures for preventing this disease, taking into account local climatic and geographical features of different regions of the country and the social living conditions of the population.

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ALMOST 35 PERCENT OF QUEENSLAND CHILDREN CONSIDERED ASTRMATIC

Camberra THE AUSTRALIAN in English 17 Mar 83 p 7

[Text]

QUEENSLAND is the most asthma-prone State in Aus-tralia, with about one in four children suffering from the disease.

A survey, by the respiratory physician at the Princess Alexandra Hospital in Brisbane, Dr Charles Mitchell, also revealed the incidence of asthma in Queensland was al-

asthma in Queensiand was al-most three times higher than doctors previously believed. Dr Mitchell's team of researchers, who examined 5000 children aged between 8 and 12 throughout the State, found 22 per cent had suffered from asthma or wheezy breathing at some time in their lives.

The survey indicated boys were more prone to the disease: 25 per cent were asthma sufferers, compared to 18 per cent of the girls.

However, of the children surveyed, 21 per cent of their mothers and 17 per cent of their fathers had suffered

from asthma.

Dr Mitchell said because of a lack of adequate statistics, it was impossible to compare accurately the Queensland figures with the incidence in other States.

However, when compared to a survey in Tasmania in the mid-1970s, the incidence in Queensland was 50 per cent

higher.
The central Brisbane area was found to be the most asthma-prone centre in the State, with 26 per cent of children suffering.

Next were Toowoomba and Bundaberg, both at 25 per cent.

"One's best guess is that it is due to allergens in the air," Dr Mitchell said.

"We suspect it might be due to the types of grasses that grow in this State. There are certain grasses that are unique to Queensland."

CSC: 54CC 7568

VICTORIAN RESEARCHERS WORK TO FIND LEPTOSPIROSIS VACCINE

Brisbane THE COURIER-MAIL in English 22 Mar 83 p 17

Text

MONASH University researchers in Melbourne are working to develop a vaccine to combat a potentially fatal disease which affects mainly dairy farmers, abattoir workers and veterinarians.

More than 130 cases of the disease, leptospirosis, were reported in Queensland last year.

According to a Victorian United Dairy Farmers' spokesman, the incidence of the disease in that state has reached epidemic proportions.

Professor Solly Faine from Monash University microbiology department said the latest victim was a Gippsland woman in the late stages of pregnancy who lost her baby after getting the disease while milking cows.

He said leptospirosis was transmitted to humans through the urine of infected cattle and pigs. It could cause anything from a mild influenza-type illness to liver damage, kidney failure

and death.

Dr Ralph Shapiro from the Queensland University social and preventive medicine department is conducting a survey of meatworkers in the state.

The survey involves taking blood from every worker to assess the prevalence of anti-bodies to three diseases — leptospirosis, brucellosis and Q-fever.

"The amount of antibodies people have in their blood indicates whether or not they have been exposed to these diseases," Dr Shapiro said.

He said le cospirosis was not a major health problem in Queensland. Meatworkers and farmers were most susceptible. Deaths were rare.

OFFICIALS REPORT DIARRHEAL DISEASES UNDER CONTROL

Dhaka THE BANGLADESH TIMES in English 22 Apr 83 pp 1, 8

[Article Shehabuddin Ahmed]

[Text] Incidence of diarrhoeal diseases, including cholera, has been substantially reduced following the intensive campaign for combating water-borne diseases in the country over the last eight months.

According to official estimates, the diarrhoeal diseases, claimed 2,105 lives in 1981, 4471 lives in 1982 and 676 lives in the first three and half months of the current year (January 1 to April 15).

Official estimates show that during these three periods under review, the total number of persons attacked by these diseases were 5,49348 in 1981, 5,50,442 in 1982 and 12,743 during the first three and a half months of the current year.

Diarrhoeal diseases, namely, cholera, gastroenteritis, dysentry and the like, broke out in 'intensive form' in Dhaka, Rangpur, Barisal, Patuakhali, Pabna, Faridpur, Jessore, Khulna, Sylhet, Comilla and Mymensingh in September, 1982.

Sustained efforts on the part of the health authorities helped curb the intensity of the diseases. These now remain confined to a few pockets of Barisal, Khulna, Pabna, Faridpur and Jessore.

And some 300 medical teams have been dispatched to the affected areas in Barisal, Faridpur and Khulna to eliminate the vestiges of the diseases. In Barisal, the medical teams have inoculated 15,28,500 persons and distributed 1,68,400 oral rehydration salt solutions and 46,800 water purifying tablets. In Khulna, the medical teams inoculated 1,41,022, distributed 8,613 oral rehydration salt (ORS) and 58,179 water purifying tablets (WPT).

The death toll was the highest in Patuakhali district, where 501 persons died, followed by Barisal where 428 persons died during the period under review. In Khulna 312 persons died, while Jessore had a death toll of 247. In Pabna, the diseases took a toll of 147, while in Faridpur 301 persons died during the period.

The outbreak of diarrhoeal diseases in the southern districts have been ascribed to the extreme paucity of safe drinking water in the area. People mostly take river water and fall prey to these diseases during the September-October, when the water begins to recede.

Experts point out that the death toll could well have been much smaller, had the cases been reported to the local health workers in time.

BRIEFS

DIPHTHERIA IN BARISAL-BARISAL, April 14--Diptheria has broken out in the district in epidemic form and about five persons died of the disease. Seventy persons were admitted to Sher-e-Bangla Medical College Hospital during the few days. The only ani-diptheria serum (ADS) which is used in diptheria is not available here. Hundreds of children are attending Medical College Hospital, TB Hospital and Police Hospital to have DPT injection. [Dhaka THE BANGLADESH TIMES in English 15 Apr 83 p 5]

FARIDPUR DIARRHEA CASES--FARIDPUR, Apr. 14--At-least 540 persons have been attacked with diarrhoeal disease in Sadarpur, Sibchar, Bhanga and Madaripur thanas during the last fortnight, 34 of them died so far. Shibchar and Sadarpur thanas were attacked by the disease recently. Thirty eight medical teams are now working at village level in the affected areas. [Dhaka THE NEW NATION in English 15 Apr 83 p 1]

JAUNDICE IN CHITTAGONG--CHITTAGONG, Apr. 20--Jaundice has broken out in an epidemic form in Chittagong Port area. This disease has affected about four hundred employees of Chittagong Port Authority in the last three months. According to port hospital, jaundice has so far claimed the life of one Badal Kanti Barua of Port Electric Department. The port hospital has so far treated over three hundred jaundice patients in both outdoor and indoor wards. At present forty patients including the Chairman of Chittagong Port Authority Mr. Mahmudul Islam have been undergoing treatment at the port hospital. [Dhaka THE BANGLADESH OBSERVER in English 21 Apr 83 p 12]

BRAHMANBARIA CHOLERA DEATHS--BRAHMANBARIA, Apr. 21--At least 10 persons died of cholera and over 60 others attacked in 4 villages of the upgraded Nabinagar than under Brahmanbaria subdivision. According to official sources death toll is four and the number of affected persons 20. The villages affected by the disease are Krishnanagar West, Sadekpur, Ibrahimpur and Chargosuaipur. [Excerpt] [Dhaka THE NEW NATION in English 22 Apr 83 pp 1, 8]

CHOLERA IN JESSORE-JESSORE, Apr. 20-At least 70 persons died of cholera and several hundreds were attacked by the disease in different parts of the district since last January. The district authority, however, admitted 34 deaths till March 31. In a recent visit to the village Gokarna under Dehi union, Sarsha thana, this Correspondent came to know that four persons had died there in the first week of this month while hundred others were attached. Sporadic

cases of cholera were also reported fro Keshabpur, Lohagara, Kalia, Abhoynagar and Narail thanas. According to Jessore Sadar Hospital average five persons are being admitted there a day for quite some time now. When contacted over telephone, the Civil Surgeon, Jessore declined to give any detail of the situation saving there was total embargo on ventilating any report to the press. When his attention was drawn to the four deaths at Gokarna village he expressed his ignorance. He, however, told The New Nation he would look into the matter and would take measures if necessary. The Civil Surgeon claimed that the situation was under control but admitted that 60 per cent of the population was still outside any prophylactic measures. [Dhaka THE NEW NATION in English 22 Apr 83 p 2]

DIAPRHEA EPIDEMIC REPORTED—NILPHAMARI—Our Nilphamari Correspondent adds: 10 persons died of diarrhoea in the subdivision in the last month. Over 500 persons are learnt to have been attacked by the epidemic in Nilphamari, Saidpur, Jaldhaka, Kishorganj, Domar and Dimla thanas. Five to six persons on the average are being admitted to subdivisional hospitals each day. Meanwhile, the main antidiarrhoeal Medicine Saline preparation have become very dear in the markets. A bag of saline preparation is selling at Taka 50 to 60. The doctors' demands on patients have also become very exacting. Recently one Tabbuddin, 42, of the village Kanchanpara, Nilphamari thana died of diarrhoea. The doctor attending the patient refused to push saline until the patient clears his fee which the dying man was unable to pay. The doctor left him without pushing the needle and the man died no sooner than the physician left nim. [Dhaka THE NEW NATION in English 22 Apr 83 p 2]

EXPANDED VACCINATION PROGRAM BEING IMPLEMENTED

Bujumbura LE RENOUVEAU DU BURUNDI in French 18 Mar 83 pp 1-2

[Article by Serge Gahungu]

[Text] The Expanded Vaccination Program (PEV) is a plan included within the framework of the government goal--"health for all between now and the year 2000," which is also an objective of the World Health Organization (WHO).

In an interview granted to LE RENOUVEAU DU BURUNDI, the director of the PEV, Dr Didace Seruzingo, assessed the progress of this program, which has now been under way for 3 years.

Its goal, Dr Seruzingo said, is to reduce the incidence of and mortality from the childhood diseases raging in our country as much as possible. They include diphtheria, whooping cough, tetanus, poliomyelitus, tuberculosis and measles.

At the beginning of the program, the director of the PEV went on to say, the project had the goal of achieving national vaccination coverage of 50 percent of the target infants (from birth to the age of 2) between 1980 and 1985, to improve the knowledge of health personnel with a view to greater motivation for preventive and educational medical measures and full participation in the PEV, improvement of the detection of the PEV diseases in order to assess the efficiency of the program, and informing the population of the advantages offered by the PEV services, such as to achieve maximal popular participation.

Discussing this program of action, Dr Seruzingo indicated that the planning of activities was done in such a way as to begin in each medical sector and medical region at 2-month intervals, during which time contact is made with the local administrative and health authorities. It is also during this period that the dispensaries and health centers must be provided with equipment (refrigerators, syringes, needles, vaccination cards, vaccines, etc.). According to the director of the PEV, this schedule was conceived so as to ensure complete coverage by these activities by the first half of 1984. Where the achievements of the PEV are concerned, Dr Seruzingo said that a beginning was made in the pilot zone of Muramvya in October of 1980. In April of 1981, operations were extended to the Muyinga sector, and in May to the Kirundo medical sector.

The assessment of the vaccination coverage in each of these sectors shows satisfactory results. For example, the coverage rate for vaccination against tuberculosis (BCG) is 72.8 percent in Muramvya, 90 percent in Muyinga and 92 percent in Kirundo.

Thus, since the goal was 50 percent, the results proved satisfactory, particularly since the vaccination coverage rate exceeds 50 percent not only for tuberculosis, but for whooping cough, poliomyelitis and measles as well.

With regard to the number of children who have received the whole series of vaccinations, without interruption (once for BCG, three times for DPT, three times for polio, and once for measles), the rate is 31.7 percent for Muramvya, 60 percent for Muyinga and 46 percent for Kirundo.

Thus, overall, it is plain that the program has had a certain impact on the target diseases. In this connection, the director of the PEV notes a net decrease in the incidence of the diseases in question. By way of example, between 1980 and 1981, the number of cases of whooping cough dropped from 695 to 623 in Muramvya, from 412 to 317 in Muyinga, and from 514 to 348 in Kirundo. The number of cases of measles dropped from 3,679 to 2,790 in Muramvya, from 4,384 to 2,287 in Muyinga, and from 4,766 to 3,528 in Kirundo. Thus a rather remarkable decline can be expected by 1985, if all goes well.

Again on the subject of achievements, Dr Seruzingo said that the activities were extended to four other medical sectors in 1982. They are Rumonge, Mwaro, Kibumbu, and Ngozi. In addition, equipment has been distributed to the Gitega and Buhiga medical sectors, which are about to begin vaccination.

Where the difficulties encountered by the program are concerned, the director of the PEV mentioned various social constraints. In fact, in some regions there are mothers who do not respond to the appeal of the health center authorities. This is the case in certain localities in Mwaro. In Rumonge, however, large numbers of mothers respond.

The Expanded Vaccination Program uses what is called the "fixed strategy." It involves using the personnel available on the spot. This is because even if the donor bodies were to withdraw, it would be necessary to have full vaccination within the framework of the general activities of the health services. Thus the people should be aware that in the near future, supplies will be the responsibility of the population or their respective communities.

It should be noted that the PEV has, since its establishment, received some foreign aid.

The foreign contributions came specifically from the USAID, the USICEF and the WHO.

The USAID, acting on behalf of the American government, supplies the refrigeration equipment (syringes, needles, refrigerators), vehicles and motorcycles, and also provides training or retraining of health personnel.

The UNICEF supplies the vaccines, refrigeration equipment, vaccination cards and rolling stock.

The WHO also provides vehicles, vaccines, needles and syringes.

The Burundi government also contributes to the financing and provides personnel.

5157

BRIEFS

MALARIA CASES--The Colombian Government today reported that approximately 200,000 cases of malaria have been detected in the border areas with Panama and Ecuador. The Colombian cabinet has increased the budget for its campaign against malaria from \$8 million to \$20.6 million. [PA120320 Paris AFP in Spanish 1934 GMT 10 May 83]

BRIEFS

COLON: HIGH MALARIAL INCIDENCE—Trujillo, Colon—Eighty percent of the population of this sector is sick with malaria, owing to the fact that conditions in the area favor breeding places of the transmitter mosquito and to the lack of doctors and medicine. That is what several inhabitants of Trujillo said, including some doctors, who called attention to the need to conduct a fumigation campaign throughout the area, in order to reduce the incidence of malaria, even if only by 50 percent. There are only eight doctors in the sector for the entire population which, together with the scarcity of medicine, becomes a critical matter that requires urgent attention. Doctors who talked with LA PRENSA said that there are persons who seemingly are not sick at all, but who, when examined, are found to be victims of malaria. They said that "for the present our only weapon is the action that the Vector Control Division is carrying out." [Text] [San Pedro Sula LA PRENSA in Spanish 16 Apr 83 p 2] 8255

ANTIMALARIAL FUMIGATION PLANNED—Tegucigalpa—The Vector Control Division of the Secretariat for Public Health will fumigate more than 160,000 dwellings throughout the country during April and May as part of the government's anti-malaria campaign. Dr Carlos Pineda, director of the Vector Division, reported that this campaign will cover an average of 1,850 Honduran towns and will serve almost 3 million inhabitants. In order to eliminate the malaria transmitter mosquito, DDT and Fenitrothion will be used, since these insecticides are the most resistant to inclement weather, added the doctor. Finally, Pineda said that the possibility is being considered of carrying out fumigation on a quarterly basis, in order to insure better control of the disease.

[San Pedro Sula LA PRENSA in Spanish 8 Apr 83 p 23] 8255

RAMPANT FILARIASIS REPORTED IN ACEH

Jakarta 'EkDEKA in Indonesian 31 Jan 83 p 4

[Article: "Many Can to Longer Be Treated; Tens of Thousands in Aceh Suffer From Filariasis"]

[Text] Tens of thousands in the Aceh Special Region, many of whom are beyond edical treatment, have contracted the highly contagious disease Filariasis which is spread by the Mansonia and Culex Fatigan mosquitces.

The regions struck by the disease include 105 villages in Banda Aceh, Aceh hesar, Aceh Pidie, Noth Aceh, East Aceh, West Aceh and South Aceh which is the district that has been hardest hit.

Filariasis is a bloodworm disease spread by the Mansonia and common house mosquitoes which infect healty persons after biting those of the same household or village who have the disease.

The mosquitoes bite an infected person and spread the bloodworms that they have ingested. After the bloodworm develops, it clogs the veins and lymphatic system causing enlargement of the extremities, genitals and breasts.

Or H. Burhan iddin Yusuf, chief of the Contagious Disease Eradication Service of the Aceh Special Region Health Department, told ANTARA Friday that if only 2 percent of one village had the disease, then he feared that the entire village would be infected with it.

He explained that, for those already infected to the point that they have swelling of the extremities, genitals and breasts, there is very little chance that they can be treated successfully with drugs. The only medical nourse remaining for them is excision of the body parts affected by the disease.

He said that mass treatment will be provided in the near future to approximately 24,600 infected Acehnese. This treatment will consist of innoculations, pills and blood tests.

He urged all inhabitants who think they may be infected with Filariasis to quickly seek treatment at the nearest public health center. This is part of the effort to provide immunization to both those who have the disease and those

who do not. Special target groups are those of the same household or same village.

Or Yisuf explained that the easiest way to treat those who have recently contracted the disease is by the use of Filorzan. This is a pill that can be obtained from the public health centers and drugstores with a doctor's prescription.

The side effects of Filorzan are headaches, upset stomach, nausea and fainting. These side effects, however, do not constitute threats to one's health.

9127 050: 4213/41

BRIEFS

CHOLERA KILLS 18--A cholera outbreak in Aceh province, North Sumatra, has claimed 18 lives and hundreds of other victims have been admitted to hospitals, the Antara news agency reported in Jakarta yesterday. Dr Burhanuddin Yusuf, head of the local health department, said that the outbreak was caused by prolonged drought in the area. [Text] [Singapore THE STRAITS TIMES in English 28 Apr 83 p 4]

ALARM OVER MALARIA--Marudi--Medical authorities have warned timber workers going to Indonesia to take precautions against malaria following the discovery of a rare and extremely dangerous form of the disease. A 40-yearold Sarawakian Chinese who had been working in a timber camp in Indonesia was admitted to Marudi General Hospital recently in a semi-conscious condition with malaria. Doctors found he was suffering from a rare complication of a common form of the disease which affects the patient's brain and is normally fatal. The Marudi man was kept in intensive care at the hospital for two weeks and has since recovered. Marudi General Hospital medical officer Dr Chan Kah Hua said it was the first time he had seen this form of malaria in Marudi. A similar case had occurred in Kuching about four years ago and the patient had died. He warned timber workers bound for Indonesia, and also those working in the interior of the upper Baram, to take anti-malaria drugs. He also advised people to be especially careful with personal hygiene because of the possibility of a cholera outbreak in drought-hit Baram. [Text] [Kuzla Belait THE BORNEO BULLETIN in English 16 Apr 83 p 48]

LEPROSY TREATMENT PROGRAMS DESCRIBED

Abidjan FRATERNITE MATIN in French 7 Feb 83 p 13

[Text] Outside corporate city limits, all health infrastructure is under the authority of the department of rural medicine.

Thus, except for the urban headquarters of the hygiene and water control services and the expanded vaccination program, the Bouake branch of the rural health department has jurisdiction over more than 36,000 square kilometers, or all the sub-prefectures in the department plus the department of Katiola and Dabakala.

The struggle against the major endemic diseases, one of the basic responsibilities of the branch, has seen a number of successes in recent times in dealing with leprosy, a scourge which unfortunately afflicts many of our compatriots (center records show 7,000), sometimes leaving them with irreversible handicaps (amputation, paralysis, etc...)

We met with Dr P. Calen, head of rural health in Bouake. The very edifying interview enabled us to appreciate the tremendous effort being made, to understand the problems encountered, but above all to realize that there is hope for a complete cure for leprosy.

Since July 1982 the Bouake branch of rural health has as a part of its normal activity oriented its efforts toward education of the masses at the village level and the provision of sanitary improvement grants through its agents in every sub-prefecture. One might thus hope to see this scourge disappear within the relatively near future. We would add to that an overall change in attitudes on the part of the entire populace, which must take an active interest, and improvement in the socio-economic level.

Even in the most remote villages in the country, the means exist to contact and treat all lepers. In Bouake branch, visits by mobile treatment teams are followed by monthly check-ups, while inspection teams--whose task is to track down new cases, certify that there are cures, adjust or modify the treatment program--visit the people on an annual basis.

This very expensive operation, whose discontinuance would cause an immediate surge in the incidence of leprosy, is financed entirely by the state, with the

assistance of organizations specifically devoted to the cause of leprosy (the Raoul Follereau, Sovereign Order of Malta and Andre Blohorn foundations). Also worthy of mention is the very valuable and indispensable complementary assistance provided by various benevolent organizations: the food services and management provided by the Order of Malta in the surgical wing of the leprosarium at Manikro, the six hospital blocks provided by the Bouake Kiwanis Club, the radioscopic apparatus provided by the Abidjan-Lagune Lions Club, etc...

According to Dr Calen, with the therapeutic arsenal now at the center's disposal, a leprosy patient who adheres scrupulously to his regimen of prescribed treatment can be cured in the same way as people with other ailment are gured. Unfortunately, and all too often, Dr Calen laments, some patients discontinue their treatment prematurely, believing that they are cured. Thus by their own actions they bring about a relapse and prolongation of the malady. Added to that is the ashamed reluctance of some people to let others know they have leprosy, and in such cases they are seldom seen until the disease is at an advanced stage where cure cannot be brought about without irreversible after-effects (amputations, paralysis, etc...) and an excessively prolonged stay in a leprosarium.

However, there is hope for a cure for leprosy. Significant progress has been noted in recent years, a development which should make everyone happy. For some time, in fact, there has been talk of new methods for treatment of leprosy. On this subject, Dr Calen told us: "Actually, new methods for leprosy have just been discovered. They differ from the former in that the sulfones traditionally used are replaced by specially prepared pharmaceutical products that are faster-acting, more effective and thus make it possible to shorten treatment time and speed up recovery."

9516

COUNTRY SAID HIT BY INFECTIOUS EYE DISEASE

Blantyre MALAWI NEWS in English 9-15 Apr 83 p 1

[Text]

MALAWI has been hit by a "highly infectious" eye disease which leaves sufferers nursing swollen and bloodshot eyes for as long as a week, a spokesman of the Ministry of Health headquarters in Lilongwe confirmed yesterday.

"Thousands of people have been treated at urban and rural hospitals throughout the country for the disease, haemorrhagic viral conjuctivitis, in what is the biggest outbreak of the disease in the country," the spokesman said.

It is believed the disease was contracted from neighbouring countries where outbreaks were reported as far back as a year ago. But the spokesman stressed that people should not panick because the country had enough drugs to treat the disease, whose virus usually dies off within a week.

And when a sufferer recovers, he or she is unlikely to get infected again for a long time Dismissing rumours that the disease was contracted after a person used a type of soap, the spokesman said an unidentified virus unrelated to a soap caused the disease. "The soap story is untrue," he stressed.

"We have not been able, as yet, to isolate (and identify) the virus because we don't have the facilities for this," the spokesman said. But he said the drug groups of anti-biotics and steroids found in most of the hospitals in the country cured the disease.

He explained that although sufferers' eyelids and conjuctiva swelled up and blood discharges could be seen in the eyes, the disease did not permanently damage eyesight. "Be calm—let the disease take its course—and you will soon fully recover," he remarked.

The spokesman said the first established pattern of the outbreak was registered in Lilongwe in January this year. Since then, the disease had attacked most parts of the country.

Closely-knit communal units like families and educational institutions had seen the members getting contractions one from the other.

"When the disease first struck in Lilongwe we used to treat an average of about 100 people at the hospital per day," the spokesman said. "But now this number has dropped substantially, indicating that the virus is burning itself out."

The spokesman gave the following tips on the disease:

- Immediately seek medical attention as soon as your eyes feel like there is sand in them.
- Take full course of drugs given to you by medical authorities. The drugs may be eye ointment, or tablets or capsules.
- Always keep your eyes as clean as possible, while also strictly observing the rules of hygiene.
- As much as possible, avoid contacting tellow members of the society.

cso: 5400/251

MALAWI

BRIEFS

VACCINATIONS IN RUMPHI--Over 50 per cent of children in Rumphi were vaccinated against polio during the recent campaign in the district. According to an official of the Ministry of Health, 3,403 children were vaccinated against polio. There are 5,623 children of the 2-0 age group in the district. The official said it was pleasing that over 50 per cent of the children in the district received the three required doses.--Mana [Text] [Blantyre DAILY TIMES in English 5 Apr 83 p 2]

KASUNGU POLIO CAMPAIGN COMPLETED—The stop polio campaign launched in Kasungu in August 1981, has now been completed, an official at Kasungu District hospital said last week. The official said that the campaign was completed on January 31 this year. He said despite the delay experienced at certain times due to various unavoidable reasons the campaign had been successful. About 15,000 children had been immunised against polio in the district during the campaign, out of a target figure of about 20,985, according to a final report on the campaign, released by the official. Partly funded by the Save the Children Fund and conducted by the Ministry of Health, the campaign is part of a nation—wide immunisation programme currently underway and aimed at eliminating polio in the country. Children of and below the age of 23 months are given three separate doses at intervals to get the immunity against polio.—
Mana [Text] [Blantyre DAILY TIMES in English 5 Apr 83 p 2]

CHOLERA REPORTED IN SABAH, SARAWAK

Highest Incidence in Sabah

Kuala Lumpur NEW STRAITS TIMES in English 3 Apr 83 p 9

KOTA KINABALU, Sat. - Another 75 cholera [Text] cases were detected in Sabah last week, bring-

ing the total number to 644 so far this year.

The disease also claimed two more lives a five-year-old boy from Kampung Kunak Darat and a four-year-old box from Tenom and from Keningau.

Dr Chan said L. Dr Chan said L. Surut and Kinabata old boy from Kampung Kunak Dua — during the same period, bringing the number of deaths to

The State Medical Services Director, Dr Me-chiel K.C. Chan, said to-day 24 of the new cases were from Sandakan, seven, including the two deaths, from Kunak, eight from Tawau, 24 from Lahad Datu, nine

from Semporna, two from Tenom and one from Keningau. Dr Chan said Labuk Sugut and Kinabatangan districts were now chol-

era-free, Eight cholera carriers were also detected in Sandakan, Labuan and Lahad Datu districts in the past week, he said. KUCHING: Another

cholera case was reported today, bringing the to-tal number in Sarawak this year to nine.
A State Medical De

partment spokesman said the latest victim was a 21-month-old girl from Rumah Pandan, Sungai Seremban in Bintulu in the Fourth Division

She was admitted to the Bintulu district hospital three days ago. Another 20 carriers

were also reported in Bintulu today bringing the total number of carriers in Sarawak this year to 29

Two of the carriers were from Sekolah Rendah Kebangsaan Sungai Selat, eight from Rumah Segiong while the rest were from Rumah Pandan. - Bernama

More Than 800 Cases

Kuala Belait BORNEO BULLETIN in English 23 Apr 83 p 40

[Text]

KOTA KINABALU. — Sabah's death toll n ch s already greater for the w Four more tal to 15, wh 13 people died has year and 11 in 1961. The state's worst record-1973 when were 26 victim Last week's deaths oc-curred in Tawsu, Ku-nak and Papar.

A hefty 97 new cases were also reported, bringing the 1983 tally to an alarming 826, more than double the number of cases for last year which was up then the state's worst recorded year.
Wost of last week's new
cases came from the
East Coast, but Beaufort was registered 2a newly-infected area when one case was re-

BRIEFS

MALARIA CASES REPURTED—Tanah Merah, Thurs—More than 200 malaria cases were reported in Kelantan's Tanah Merah district the first two months of the year, district medical officer Dr. Nik Saidina Omar said today. He said the majority of the cases were detected in land schemes and new villages. [Text] [Kuala Lumpur THE NATIONAL ECHO in English 8 Apr 83 p 3]

DIARRHLA CASES REPORTED—Seremban, Sat—Another 213 people were reported to be down with diarrhea, stomach cramps, vomiting and headache bringing the total number of people suffering from these symptoms to 847 since Wednesday. State Director of Medical and Health Services Dr P. Ratnajothy said today that there were another 71 such cases in Port Dickson district. The out-break was attributed to E-Coli bacteria which was found in the water supply at the Linggi treatment plant. He said that there was an excess of these bacteria in the water supply. More chlorine had been added to the water supply. Of the 706 confirmed diarrhea cases confirmed yesterday, 396 were pupils, from 10 schools. State Secretary Datuk Ismail Mansor and officers of water supply authorities visited the water treatment plant yesterday to oversee chlorinating. [Text] [Kuala Lumpur THE NATIONAL ECHO in English 10 Apr 83 p 1]

NEW CHOLERA CASES FOUND--Kota Kinabalu, Sat--Two new cholera cases were reported here last week after the district had been declared cholera free. The cases were from Kampung Pelarian and Telipok, state Director of Medical Services Dr Mechiel K. C. Chan said today. However, the Kota Belud district has now been declared cholera free as no new cases were reported. The total number of cholera cases in the state so far was 729 since January. The number of deaths due to the disease stands at 11. A total of 11 carriers have also been identified. He urged the people in affected areas to drink boiled water and cooked food. [Text] [Kuala Lumpur THE NATIONAL ECHO in English 10 Apr 83 p 1]

CHOLERA ALERT--Kota Bharu, Mon--All heads of Government Departments and statutory bodies in Kelantan have been urged to coperate in checking the spread of cholera. The Deputy Principal Assistant State Secretary, Haji Hassan Haji Hussain, in a circular to the department said that so far two deaths due to cholera were reported in the state. A total of 77 cases of the disease and 85 carriers have also been reported. He said that in view of the seriousness of the situation it was important for the departments to cooperate in checking the spread. A pamphlet outlining the signs and symptoms of the disease have also been sent. [Text] [Kuala Lumpur THE NATIONAL ECHO in English 26 Apr 83 p 3]

BRIEFS

LEPROSY IN CIUDAD JUAREZ--The Department of Health and Medical Care has declared the region an epidemic disease zone following the discovery that, so far in the present year, there have been 48 cases of leprosy. Juan Rauda Esquivel, represtative of that agency, has announced. He added that 10 cases of the disease were found during the past week, though it had been considered as having been eradicated in the ountry. The majority of those affected had been victims of contagion, he indicated. He explained that the first symptoms are spots on the skin and lack of feeling. Rauda Esquivel declared that leprosy can be controled and even cured by treatment with a product called Diamine Diphenyl Sulfonal. The official called upon doctors in the region to inform the Department whenever they encountered new cases. [Text] [Mexico City EXCELSIOR in Spanish 22 Mar 83 p 5-D] 12336

ANTITUBERCULOSIS MEASURES EXAMINED

Kathmandu THE RISING NEPAL in English 25 Apr 83 p 2

[Editorial: "Anti-TB Campaign"]

[Text] Tuberculosis, known more commonly as TB, is one of the more fearsome diseases in the world but thanks to recent development in the medical science, TB can now be cured and person afflicted by the disease lead a normal life after medication. But the disease should be detected at early stages which make the treatment that much easier and when the disease is not likely to prove fatal. Yet a few decades ago TB was a fata disease and a patient had to be sent out to a distant and isolated sanitorium where he could rest and try to recoup his strength. But all that, of course, is now a thing of the past. In Nepal, there is no exact estimate of the number of those suffering from TB but the need to eradicate the disease has been long left and the TB Eradication Association has been doing exemplary work in combating the disease. These efforts combined with those of His Majesty's Government are resulted in the detection of a large number of cases which have been treated. But the number of those suspected of the disease is still large and the efforts need to be continued to trace those with the disease.

A recent news report said that there are as many as 75 thousand Nepalese people suffering from the disease. However, not all of them are receiving the necessary treatment. It is not because of the lack of medicines that this has happened. But the fact is that not many people know until it is too late that they are suffering from TB. Nor is TB confined to lungs and indeed it is feared that TB in other parts of the body is much more common. As it is mainly in the rural areas that most TB cases are found, it is important that medical and health services to detect and treat TB be extended to these areas. This means that facilities such as skin tests as well as radiology should be extended to the rural areas. While appreciating the fact that this might be difficult in the absence of full fledged hospitals there, the task can be adequately performed at least as far as detection is concerned by mobile units after which medical teams might be sent to the areas to treat the cases. Indeed, the suggestion made by a doctor that health workers should be sent out to the villages to identify TB and undertake the necessary treatment needs a careful consideration and coulbe be an effective way of meeting the menance of TB.

ORF VIRAL INFECTION CASES -- seventeen cases of ori viral infection, caught from sheep, were reported to the Health Department last week. Dr W. A. Malpress, Medical Officer of Health for Christchurch, said yesterday that usually several hundred cases of orf a year were reported. The department was concerned that the number did not decrease in spite of better hygiene standards at freezing works. The 17 cases reported last week were about three times the usual number. Orf, a skin disease, is carried on the wool and skin of sheep, farmers and freezing workers being the most likely to catch it. The virus enters the body through cuts, blisters, scratches, and burns, and the sufferer gets an irritating sore which starts as a red spot. The spot grows, becomes weepy, and eventually develops a scab. The Health Department warns that people handling sheep or sheepskin should guard against orf by covering any broken skin with a waterproof dressing. The department also heard last week of one case of meningitis, nine cases of the food poisoning disease, campylobacter, two of salmonella, one of hepatitis, and three of tuberculosis. The meningitis sufferer was a child, who was admitted to Christchurch Hospital with the disease, and discharged after a few days. The illness was not caught in a thermal pool but by bacterial infection. So far this year, 89 cases of campylobacter have been reported to the department, about four or five times as many as usual. [Text] [Christchurch THE PRESS in English 27 Apr 83 p 3]

CSO: 540C/4415

STATISTICS SHOWING MEASLES, MENINGITIS DECLINE

Niamey SAHEL HEBDO in French No 354, 28 Mar 83 p 17

[Article: "Measles and Meningitis"]

[Excerpt] Measles and meningitis are two epidemic deseases that show up in Niger during the hottest months, that is, in March, April and May. Given the strongly seasonal character of these diseases, it is logical to think of the intervention of climatic factors in order to explain their development. Doctor Konate Ousman of the service of hygiene and mobile medicine confirmed the accuracy of this thinking by specifying concisely that the dryness of the air during the months of January, February and March, attacks the masal and pharyngeal nucous membrances, and especially the presence of dust in the air, especially further epidemics. On the other hand, the sharp drop in morbidity which accompanies the return of the rains is explained by the disappearance of the dust. Starting from there, we wanted to get a general picture of the development of these two diseases in Niger. In general, measles and meningitis in Niger are losing ground. Thus, if one considers their development from 1979 to 1981, one notes a rather remarkable decline.

Year	Meningitis	Measles
1979	7,963	44,294
1980	4,259	36,811
1981	2,585	27,803

9895

AID TO MEASLES VICTIMS--PORT MORESBY, Tues:--A medical team has flow to a remote area of Papua New Guinea near the Indonesian border where up to 25 villagers have died from a variety of causes including measles. The villagers' resistance to disease is low after a long drought and crop failures, according to local medical authorities. The team of two orderlies, a nursing sister and a government health officer left Kiunga on the Fly River today for Tabubil, the site of the big Ok Tedi gold and copper project. Dr. Michael Cain of the Kiunga Medical Centre said today that he had reports of 25 people dying from measles, malaria, gastro-enteritis and pneumonia. The company has been sending some people down to us. Those who had made it here have survived," he said. The medical survey, expected to take 10 days, is hampered by a shortage of measles vaccine. [Perth THE WEST AUSTRALIAN in English 16 Mar 83 p 60]

CIRCULAR ON FOOD SANITATION LAW ISSUED

OW241922 Beijing XINHUA Domestic Service in Chinese 1301 GMT 22 Apr 83

[Text] Beijing, 22 Apr (XINHUA) -- The People's Republic of China's Food Sanitation Law (Trial), adopted at the 25th meeting of the 5th NPC Standing Committee, will be officially put into experimental implementation on 1 July of this year. In this connection, a joint circular was issued recently by the Ministry of Public Health, the Central Patriotic Sanitation Campaign Committee, the Ministry of Light Industry, the Ministry of Commerce and the China Food Industry Association. The circular urged the fatriotic sanitation campaign committees, public health and commerce departments and other departments concerned at all levels to widely propagate the food sanitation law in May of this year.

The circular said: The promulgation of the food sanitation law for trial implementation is to ensure the sanitation of food and protect the people from food pollution and harmful particles that might be contained in food. It is of great importance to the people's nealth. To propagate the food sanitation law and enhance the people's understanding of this law is an important link of thorough implementation of the PRC Food Sanitation Law (Trial).

The sircular said: Propagating this law should be regarded as one of the contents of our efforts to build a socialist spiritual civilization. In this context, it is necessary to strengthen our education in the concept of the legal system and the concept of morality so that the food production and marketing departments will understand that it is their bound occupational, moral obligation to ensure food sanitation and protect people's health, and that they will be held legally responsible for violating the food sanitation law and for doing harm to people's health.

It is necessary to expound on the importance of this law, popularize are intific knowledge in this regard and disseminate the good experiences and the meritorious deeds of advanced individuals in implementing the food sanitation law.

150: 5400/4135

DISEASE REPORTED IN 'UNSANITARY' GOLD MINING CAMPS

Manila PHILIPPINES DAILY EXPRESS in English 29 Apr 83 pp 1, 6

[Article by Red Batario]

[Text]

CANGUNOD, Placer, Surigao del Norte, April 28 – About 100 unauthorized army soldiers have descended on the site of collapsed two nels here and are firing their guns indiscriminately to scare the people.

Sources said that the army soldiers were themselves fortune seekers competing with other people for their shares of the gold.

Surigao Governor Rolando Geotina had asked Defense Minister Juan Ponce Britile and Armed Forces Chief Gen. Fabian Ver to send the soldiers back to their units and dispatch a platoon of military police to help, maintain order in the area.

WITH RECOVERY operations temporarily abandoned, a new specter has reared its ugly head on this island, 90 minutes away by pumpboat from Sungao City

Several cases of dysentery and ET Tor have been noted here although no complete records are available as to the number of afflicted gold panners.

Regional health officer Rosano
T. Ortegosa attribute, the breakout
of these diseases to the unsanitary
conditions at the minesite which at
one time was filled with about
10,000 people.

People are simply defecating everywhere and the stench is sometimes overpowering," she said. However, Ortegosa said, the regional health office is currently putting up four latrines in strategic locations around the island to prevent the outbreak of an epidemic.

EIGHT cave-ins have so far been recorded here starting with one that occurred on April 14. The latest happened last Tuesday although no casualties were reported.

The 70 miners reported to have been trapped April 14 under practically a small mountain runnelled through like Swiss cheese are now believed to be all dead.

Recovery operations have been indefinitely suspended because the barge that was supposed to bring in the buildozers failed to arrive.

However, it was reported here today that the barge will be arriving either Friday or Saturday.

Surigao del Norte Gov. Rolando Geotina said that Defense Minister Juan Ponce Enrile has already directed Navy authorities to send the barge to Surigao City.

The island is about eight kilometers off Mindanao island with no regular ferry service and no direct communication to Manila.

The buildozers would be used in digging into the tunnels of the prewar Lakandula Mines, Inc. where the 70 victims are trapped.

Reports from Surigao del Norte said that about 20 rescue volunteers are waiting for the necessary earthmoving equipment.

Geotina and the National Disaster Coordination Center (NDCC) had earlier reported that besides the 13 bodies so far recovered, 70 others were trapped. Later reports, however, said that 74 people might still be inside the collapsed tunnels but NDCC officials said they could not tell for sure because reports from the area were sketchy.

The victims were among an estimated 7,000 people who swarmed over the old mine recently after reports circulated that a boy had found a gold nugget big enough to buy a motorcycle.

IN ANOTHER development, Geotina revealed that he plans to request for a Navy patrol boat and a complement of mulitary police to secure the site. Right now, about 200 mining holes are being dugged in the island which uncannily resembles the boom town farmosphere of Hinobaan in Negros Occidental — the site of a gold rush early last year.

Lucrecio Gatchalian, an engineer of Manila Mining Corp. which has been coordinating the rescue work, said that the gold panners are boring holes about one meter square into the mountain without properly shoring up the tunnel.

Gatchalian told the Express that these tunnels also vary in depth ranging from 40 to 50 feet with interconnecting passageways.

These were often the causes of cave-ins, Gatchalian added.

Eyewitnesses among the panners, however, refused to talk about the accidents.

A local weekly tabloid, the Surigas Star, reported in its latest issue that "eyewitnesses gave sketchy stories about the mishap."

CSO: 5000/4330

TB REMAINS KIMBERLY'S MAJOR HEALTH PROBLEM

Kimberly DIAMOND FIELDS ADVERTISER in English 22 Apr 83 p 3

[Text] Tuberculosis remains the major health problem in the city, the 1982 annual report of the Kimberley municipal health department says.

'The fact that there has been a decrease in the number of notified cases is no indication that the disease is under control and is no reason for complacency,' the report says.

According to the report 438 cases were reported in 1981 and 389 were reported in 1982.

'Contact tracing and management remains a top priority yet in families where the socio-economic conditions are bad and the nutrition is poor 10,6 percent of contacts developed tuberculosis in spite of preventative treatment.'

Treatment

The report says that short term treatment of all cases with a drug called Rifampicin 'would greatly reduce the number of people who are reluctant to complete the longer treatment period and who have to be cajoled to attend regularly.'

'The treatment schedules containing Rifampicin are, however, prescribed for patients receiving treatment in a working situation.

'It is regrettable that a high percentage of patients are unemployed when they report to the clinic for the first time, usually with the disease in a fairly advanced stage,' the report says.

'This state of affairs an be ascribed to fear rather than ignorance because active health education is creating an increasing awareness of the disease. It will take time to eradicate the stigma attached to tuberculosis.'

CHOLERA DEATHS--The present cholera epidemic in South Africa has claimed the lives of 45 people and 17 481 people have been treated for the disease. Of these, 3 909 cases have been bacteriologically proven, a spokesman for the Department of Health said in Pretoria yesterday. In Kwa Zulu, 2 708 cases have been reported telephonically and the department has been informed of nine deaths. Natal has been the worst hit area during the epidemic with 22 deaths and 3 235 proven cases. Southern Transvaal has reported 159 cases and four deaths and Northern Transvaal 375 cases with four deaths. In the Free State, 30 cases have been reported, but no deaths from cholera have been reported. In the Eastern Cape, 16 cases have been reported and one person has died. In Kangwane four people have died and 94 cases have been bacteriologically proven. [Text] [Johannesburg THE CITIZEN in English 4 May 83 p 8]

GOVERNMENT OFFICIAL URGES 'CRITICAL' REVIEW OF HEALTH SYSTEM

Port-of-Spain TRINIDAD GUARDIAN in English 15 Apr 83 p 6

[Text]

SENATOR Anthony Jacelon, Minister in the Ministry of Pinance, feels that the time has come in Trinidad and Tobago for all levels of health system to critically review the methods, techniques equipment and drugs used in the health services.

The minister made the comment at the National Workshop on primary health care at the Chaguaramas Convention Centre on Tuesday. He said that one of the most important thrusts in the primary health approach is concerned with the use of appropriate technology.

In the case of drugs, Senator Jacelon

In the case of drugs, Senator Jacelon said that most Third World countries rely on a few multinational companies located in the major industrial countries for the bulk of their drugs.

FOREIGN EXCHANGE

"But a major complaint of these Third World countries has been that the drug companies did not provide a good service and that the drugs available did not adequately fulfil their needs.

The minister said that the drug companies have been known to market their products in Third World countries at prices that bear no relationship to the cost of production and distribu-

tion.

"As an indication to this, a reputable international magazine had disclosed in a recent publication that a drug used to combet high blood pressure was sold in Trindad and Tobago at a price six times that charged in Barbados and three times that charged in Jamaica.

Senator Jacelon feels that such practices not only exaggerate the

cost of health care but also damage the country's foreign exchange posi-

IMPROVED FACILITIES

He said that Government, fully cog-missint of the vital role of health in development was making significant investments in the health sector well before the period of comparative pros-

perity.

"Notwithstanding tight financial circumstances the San Fernando General Hospital was commissioned in 1968 at substantial cost to meet a pressing need for improved facilities in the South.

"A loan of \$6 million was negotiated with the World Bank in 1971 to initiate the construction of the Mount Hope Women's Hospital and other health facilities.

Women's Hospital and other health facilities.

"In its effort to develop human resources for health, Trinsdad and Tobago has been and continues to be a major supporter of the University of the West Indies.

Senator Jacelon said an important development in this regard was the recognition of the Port-of-Spain General Hospital as a teaching hospital associated with the regional University since October 1967.

The minister added that Government continues to support organisations such as the Caribbean Epidemiology Centre which provides a striking example of what can be achieved by mutual co-operation involving as it does not only the host Government, but the entire English-speaking Caribbeab, the United Kingdom, Suriname and the Pan American Health Organisation.

NATION HAS 300,000 LEPERS— he estimated number of cases of leprosy in Zaire is 300,000, according to a document of the secretariat of the CFA, division of the Social Department, on the situation of the handicapped in Africa. Mr Mohamed, chief counsellor of BIT in charge of the reintegration of the handicapped in Zaire, has indicated to the press that a leper cannot take advantage of the benefits of the project for the reintegration of the handicapped unless his disease constitutes for him "a real handicap." Leprosy, he has added, can be cured without leaving marks capable of prejudicing the professional life of the patient. In this case, it does not constitute an obstacle. Mr Raphi has cited the example of a leper who was losing all his fingers. This individual, he has indicated, can benefit from a system of rehabilitation planned for the handicapped. [Excerpt] [Kinshasa ELIMA in French 5 Apr 83 pp 1, 7] 9961

CHISHI ISLAND MEASLES DEATHS -- An average of three children a day are dying of measles at Chishi island in Luapula Province, Samfya Member of Parliament, Mr Joseph Kasongo who has just returned from there has said. Mr Kasongo said that he had already appealed to the Ministry of Health to provide drugs to the island to contain the disease. "I have been there to see things for myself and would challenge any medical officer to go to the area and see what I saw," he said. Mr Kasongo said that the outbreak of measles was so serious that it was even noticed by medical officers in Samfya mainland and the medical officers in Mansa teamed up and went to the island to try and sort out the problem. Upon reaching the area they told the villagers to gather at one of the schools where they would have their children treated. When the villagers with their children gathered, the officers told them to walk to another area, eight kilometres from where they were but they refused. "The distance was long and the children were sick. They felt they could not manage. It was too much for them," he said. Mr Kasongo also said that he had been to the area twice and returned with the same story of measles outbreak. [Text] [Lusaka TIMES OF ZAMBIA in English 29 Apr 83 p 2]

CATTLE DEATHS REPORTED--GALSANDHA, Apr. 19--About 200 cows died of stomach ailments and other disease during last two weeks in different areas of Gaibandha subdivisions, according to a telegraphic message. The worst affected areas are: Paschim Kamarnai under Kholahati union and Mouzamaliabari of Lakhmipur union of Gaibandha and Fuzlurpur of Fulchari thana. [Dhaka THE NEW NATION in English 20 Apr 83 p 2]

RABIES OUTBREAK KILLS CATTLE--An outbreak of rabies has killed more than 1,000 head of cattle during the past 20 days in Uniao dos Palmares, some 35 km from Maceio. [Rio de Janeiro JORNAL DO BRASIL in Portuguese 1 May 83 p 5 PY]

ANTI-RABIES CAMPAIGN IN LILONGWE—An emergency anti-rabies tie-up order campaign for some parts of Nsaru in the areas of Chiefs Kabudula and Khongoni in Lilongwe District and in Chief Mkukula's area in Dowa District will be on from April 15 to May 31 this year. An official of the department of animal health and industry in Lilongwe said in a press release on Tuesday that the tie-up order would be carried out because of reports of dog bites and confirmed rabies cases which had been received by the department.—Mana [Text] [Blantyre DAILY TIMES in English 13 Apr 83 p 5]

120: 5400/251

GASTROENTERITIS AFFECTING SINALOA SWINE--The order given by Governor Antonio Toledo Corro prohibiting the entry of swine from Sonora into this state, because of infection with gastroenteritis, has been disobeyed and outbreaks of the epizootic disease have been detected in various parts of the state. The leaders of the State Association of Pig Farmers in the municipality of Ahome, Jesus Angulo Salazar and Felipe Figueroa Gallardo, have indicated that some ranchers in the region had attested to having seen trucks loaded with contraband swine from Sonora traveling along neighboring highways. They pointed out that this was consistent with statistics on the demand for pork, because it was noted that a discrepancy existed between the number of swine killed in the slaughterhouses and consumer demand. Both leaders declared that, for several years, swine from Sonora have been excluded from the local market because of gastroenteritis. Nevertheless, they added, for some time, stock importers in the region have been bringing in discarded piglets for consumption by the public, which is why the state government decided to close its frontiers to keep the product out of the local market. This order was not obeyed, and now programs will have to be introduced to eradicate the sickness in this region, they concluded. [Text] [Mexico City EXCELSIOR in Spanish 24 Mar 83 p 6-D]]2336

TICKS AFFECTING JALISCO CATTLE--Approximately 20 percent of this state's cattle are infested with ticks, which are causing losses of some 400 million pesos a year; nevertheless, more than a million hectars of cattle raising land are already free of the plague, Laureano Vazquez Mendoza, head of the anti-tick campaign in this state, has declared. He noted that the state has 1 and a half million head of cattle and that 20 percent are infested with the aforementioned sickness. He added that the municipalities of Ojuelos, Encarnacion de Diaz, Lagos de Mareno, Villa Hidalgo and Teocaltiche are already free of the infestation. Vazquez Mendoza explained that, through depreciation of hides, production losses and deaths, some 400 million pesos are being lost at present. He pointed out that, in the absence of actions such as those now being carried out, the losses would be as high as those of 2 years ago, which exceeded 1 billion pesos. [Text] [Mexico City EXCELSIOR in Spanish 28 Mar 83 p 7-D] 12336

SITUATION FOR HERDSMEN SAID DESPERATE; SUICIDES REPORTED

Kano SUNDAY TRIUMPH in Engl'sh 17 Apr 83 p 12

[Article by Stevin A. Adikwu]

Text

VETERINARY officials in charge of administering anti-rinderpest vaccines on cattle in Yola and Kano are now alleged to be making brisk business in the wake of a mad rush by herdsmen to get their animals vaccinated.

My investigations revealed that the veterinary officials have resorted to hoarding the vaccines provided so as to cause artificial scarcity and force desperate herdsmen to grease their palms before administering the drugs

The vaccines are issued by the governments to be administered free of charge

When I spoke to some Fulani herdsmen in Ngurore and Fufore in Yola Local Government area of Gongola State on the issue, they expressed dissansfaction over the development and threatened to take drastic steps to stem the dubious practices.

Gongola State has the highest concentration of cattle in the Federation with over three million herd. The disease intherefore a serious threat to the livestock industry which is the life wire of the economic well-being of the state.

The situation has now thrown the population of the cattle Fulan into confusion with each heatiman making francic efforts to sustain his cattle. For some the situation has become irredeemable with all hopes dashed

A report from the area said that at least three Fulanii herdsmen were feared to have committed suicide following the death of a good number of their cattle. Cattle herding is the main source of the livelihood of the cattle Fulani.

President Shehu Shagan had earlier announced in Yola that the Federal Government had made available about one million doses of Tissue Culture Rinderpest (TCR) vaccines for the control of the disease in the state

And in Kano State an estimated 6,000 head of cattle have been reportedly killed by the disease since its detection in February this year.

The state's Chief Veterinary Officer. Dr Usman Abdulkadir Madugu who made this disclosure in an interview said that the state government had just received 190,000 doses of vaccine from the Federal Government and that efforts were being geared to speedily administer the drugs in every area where the spread of the disease had been reported

Dr. Madugu said the supply was insufficient as the state required over one million doses for the more than one million herds in the state. He then appealed to all herdsmen to seize the opportunity and come forward with their animals for vaccination.

During the interview, a herdsman from Bichi Loca, Government area had complained to the chief veterinary officer that some othicials had resorted to demanding five kopo on each cattle to be innoculated.

Meanwhile, the National Coordinator of the Emergency Rinderpest Control Committee Dr S B Oluokun has said that about 800 innoculators would be required to carry out the exercise throughout the country.

And a report by Pan African Rinderpest Campaign Programme had also revealed that the country would lose her 3 m annually if the spread of the killer disease was not arrested.

250: 5-c0/2-3

RINDERPEST QUARANTINES, PREVENTIVE MEASURES ANNOUNCED

Dar es Salaam DAILY NEWS in English 26 Apr 83 p 3

[Text]

THE Ministry of Livestock Development has put under quarantine Handeni, Kiteto, Kilosa, Mpwapwa and Kondoa districts following confirmed reports of an outbreak of rinderpest in the districts.

According to press statement issued by the Ministry of Livestock Development, Dodoma, Morogoro, Bagamoyo, Korogwe, Same and Mwanga districts have also been

Quarantined.

Livestock auction markets in the districts have been suspended, and no animals, fodder, litter or dung shall be moved from the districts, un-

der the quarantine.

The Ministry said it was anticipating meat shortages in Tanga and Morogoro regions and probably in Arusha and Kilimanjaro regions, following the measures but called on the regions to supply residents of affected areas with reason in the areas. Rind accinations in Hanc steel, Morogoro, Kilosa, sepwapwa and Kondoa districts would be conducted from May 2. It added that, the ministry had vac-

cined and enough equipments for 1,150,000 herds.

Vaccines for the campaign were donated by the Food and Agriculture Organisation (FAO) last year. The UN agency has promised to supply vaccines that would be enough for 3,000,000 head of cattle.

The ministry has appealed to livestock keepers to cooperate during the vaccination campaigns to shorten the programme.

According to the ministry 25 trucks and 15 Land Rovers would be available for the campaign in Morogoro, Kiteto, Handeni, Kilosa, Kondoa and Mpwapwa districts.

The country was regarded as free of the rinderpest menace for the last 15 years. The new outbreak was first confirmed in buffaloes in April last year in Serengeti and later in Ngorongoro and Shambarai Division in Kiteto-District.

The ministry said yesterday that a programme to vaccinate all animals north of the Central Railway Line and in Mbeya and Rukwa Regions would start in June

CSO: 5-00/252

GRAIN-EATING BIRDS KILLED—The team charged with the task of spraying toxic chemicals on grain eating birds, quelea-quelea, has killed more than one million birds in Singida Region since the exercise started in February this year. During the crop season last year, the team killed 22,450,000 grain-eating birds in the region and saved destruction of grain crops in about 18,574 hectares. The birds are a menace to growers of rice, millet and other cereals. The spraying team, which uses a light aircraft, has carried sprayed fields in 10 villages in Singida District. Spraying of chemicals is still in progress in Nkuhi and Mtwike villages. It is estimated that about 210,000 birds have been hatched in the two villages. [Text] [Dar es Salaam DAILY NEWS in English 25 Apr 83 p 3]

SLOVAK CROP PESTS, ERADICATION METHODS DESCRIBED

Crop Pest Prognosis in Slovakia

Bratislava ROLNICKE NOVINY in Slovak 24 Mar 83 p 3

[Article by Eugen Vancek, UKSUP Bratislava: "To Select Preparations Based on Findings"]

[Text] A prognosis of the occurrence of harmful agents affecting agricultural crops is an intrinsic part of an integral plant protection. The aim of the prognosis is a timely notification of plant protection specialists, agricultural enterprises, distribution organizations, management, etc., about the possible expected occurrence and spreading of important harmful agents to affect agricultural crops in individual production and growing areas.

Thus the system of scientific management of plant protection sets up space for simultaneous pin-pointing of the occurrence and intensity of harmful agents in the spring months, as well as space for material, technical and organizational measures providing for the necessary protective actions. Also this year the Department of Quarantine and Plant Protection of the UKSUP in Bratislava has presented a collection of prognoses for some economically significant pests, based on prognostic materials elaborated by the inspection of KOR [Regional Trade Union Council] and SAOR-ACHP. This forecast is to be understood as an orientation information about a probable occurrence of crop pests under currently favorable conditions for their development.

Consequently, the implementation of a direct protection of agricultural crops requires pin-pointing of the occurrence and extent of pests in the springtime and during the vegetation period, together with an evaluation of weather conditions which can considerably affect the development, spreading and extent of individual pests.

Bean Aphid--Aphis Fabae

The prognosis for this pest was arrived at on the basis of the bean aphid eggs deposition on winter hosts. Obtained findings were checked against

the course of weather in August and September of 1982. A heavy occurrence is expected in all districts of the West Slovak Region, except for those of Nove Zamky, Nitra and Topolcany. In those districts a medium to heavy occurrence is expected. A slight to medium occurrence is expected in the following districts: Velky Krtis, Michalovce, Presov, Stara Lubovna, Kosice, Roznava, Trebisov, Rimavska Sobota, Lucenec, Zvolen, Ziar on Hron, Povazska dvstrica and Zilina. In other sugarbeet growing districts a slight to sporradic occurrence of the pest is expected.

Chemical treatment is to be applied when on average 5 percent of plants attacked by bean aphid have been found in the growth; after the pests finished their fly-over from winter hosts. It is possible to use preparations B1 56 EC, Metation E50, Pirimor DP etc., according to the 1983 List of Permitted Freparations for Plant Protection.

Leutorrhynchus Napi

The prognosis was worked out on the basis of the pest's occurrence during last year's vegetation, and according to the results of soil samplings in 1982.

A heavy occurrence is expected in the Trencin district, in the northeast part of the Levice district, and in the district of Rimavska Sobota. A medium occurrence is expected in localities as follows: the eastern part of the Senica district, the Trnava, Galanta, Nove Zamky districts, the southern part of the Levice district, the eastern part of the Lucenec district, the northern part of the Rimavska Sobota district, the East Slovak Lowlands, the Trebisov and Michalovce districts, the Topla and Ondava River valleys, the Vranov, Bardejov, Svidnik districts, and the eastern part of the Presov district. In other regions of rape growing the expected occurrence is slight.

Under favorable spring weather conditions a medium occurrence can take place also in the region of the Moldava lowlands, in the Kosice hollow of Greater Kosice, and in the Velky Krtis district.

Chemical treatment of growths (diagonally in 5 spots of a growth) is to be started at that point in time when in average 4 or more imagoes of the pest are found in a 1 m² area, or when over 25 Ceuterrhynchus napi bugs are detected, instead of 3, in 4 Morick dishes. When such a number of bugs occur, the protection of rape and leafy vegetables is inevitable. When an average of 2-4 bugs are detected in a 1 m² area, the protection of rape is recommendable. The most effective protection is achieved when preparations are applied before eggs were deposited, in the feeding stage of the bugs. The following preparations can be used: Elocron 50 WP, Furadan 75 WP, Actelian 20, and others.

Bothynoderes Punctiventris

The proznosis was achieved on the basis of weather conditions during 1982, the pest's spreading, and the autumnal sound samples of soil in sugarbeet fields. In the sugarbeet rooting period of this year it is counted not apply

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on a sporadic and locally slight occurrence, but also on locally harmful occurrence in southern districts of the West Slovak Region, especially in the Nove Zamky and Komarno districts. Taking into account the gradual spreading of the pest in recent years, particularly last year, it is suggested that early in the spring agricultural enterprises and SOAR-ACHP conduct soil sounds in last year's sugarbeet fields of the endangered regions (districts Nove Zamky, Komarno, the southeast part of the Nitra district, the eastern part of the Galanta and Dunajska Streda districts) within the framework of a short-term prognosis for the occurrence and numerosity of the pest. The sounds are conducted in a checquer-board manner, in 50 cm by 50 cm size, and into a depth of 40 cm.

Minimally four sounds should be dug in a plot. The soil is then carefully pushed apart. The found pest bugs are counted, and an average for 1 m² is calculated. It is possible to verify the correct determination of Bothynoderes punctiventris in the inspection of quarantine and plant protection of the UKSUP in the particular district by handing over the catch from the soil sounds.

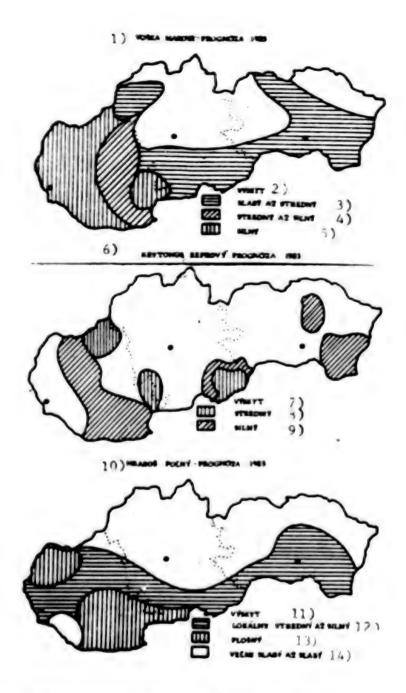
If the spring sound samples reveal an average of 0.9-1 Bothynoderes bug per l m², it is possible to expect a harmful occurrence in the sugarbeet are with a sewn this year in the vicinity—area—of the old sugarbeet field. In the areas where soil sounds have revealed more than two bugs per l m², the growth should be treated immediately when the first bug is spotted on a rooting sugarbeet. In the areas where the result of soil sounds has been an average of 1-1.9 bugs per l m², the treatment should be carried out right at the beginning of the pest's concentration. In both cases the treatments should be repeated as needed (new fly-ins of the pest, etc.), in accordance with the Methodology Handbook of the MPVz [Ministry of Agriculture and Food] for Plant Protection.

Taking into consideration the use of ground-off and one-sprout sugarbeet seed, as well as different technologies of sugarbeet growing and sowing, it is necessary that all agricultural enterprises, SAOR-ACHP and OPS [Zonal Political Directorate] pay closer attention to this pest in the first and second signal zone.

Field Mouse--Microtus Arvalis

The prognosis was achieved on the basis of recording the pest's population density in last year, and of its occurrence in past years.

A medium to heavy areal occurrence is expected in the following districts: Senica, Galanta (eastern part), Komarno, Levice, Nitra, Nove Zamky and Velky Krtis (southern part). A medium local up to sporadically heavy occurrence is expected in the following districts: Bratislava, Galanta, Topolcany, Trencin, Lucenec, Rimavska Sobota, Velky Krtis, Zvolen, Ziar on Hron, Kosice, Michalovce, Presov, Roznava, Trebisov and Vranov on Topla. For the remaining territories of Slovakia only a slight occurrence is expected. Due to insufficient data there was no prognosis determined for the districts Dunajska Streda, Poprad, Spisska Nova Ves, and only an orientation prognosis was worked out for the Banska Bystrica district.



Key:

- 1. 1983 prognosis for bean aphid
- 2. Occurrence
- 3. Slight to medium
- 4. Medium to heavy
- 5. Heavy
- 6. 1983 prognosis for Ceutorrhynchus napi
- 7. Occurrence
- 8. Medium
- 9. Heavy
- 10. 1983 prognosis for field mouse
 - 11. Occurrence
- 12. Local medium to heavy
- 13. Areal 14. Very slight to slight

With regard to this circumstance we are warning agricultural enterprises to pay closer attention to field mice both in the spring months and later during the vegetation period, emphasizing mainly several years' fodder plants.

The prognosis was elaborated for the periods of late summer and fall. It should be therefore updated in late March and early April, after both the first and second reaping of several years' fodder plants. This is also the most convenient time for treating the foci of the initial field mice occurrence. Treatments should be applied to growths of several years' fodder plants, and to growth with a recorded medium to heavy vernal and autumnal occurrence of the pest. Growths with field mice focal occurrence after the first and second reaping should also be treated. We recommend the preparation Stutox, Niva grains, etc. Great attention is also to be paid to places of the pest's permanent habitation, from which individuals can spread into surrounding growths.

Crop Pests in Slovakia

Bratislava ROLNICKE NOVINY in Slovak 29 Mar 83 p 3

[Article by Eugen Vancek: "To Select Preparations Based on Findings"]

[Text] Cabbage Aphid--Brevicoryne Brassicae

The prognosis for the attacks on winter rape growths was elaborated on the basis of the numerosity of autumnal generations of cabbage aphid minus winter eggs on rape plants.

A harmful occurrence, requiring a treatment of growths before blooming, is not expected. Under extremely favorable conditions in the early spring (without severe dry frosts and considerable temperature variations), and later in the spring, with no stronger freezing and no heavy rains, a harmful local occurrence can take place in the following districts: Senica, Nove Zamky, Nitra, Levice, Komarno, Galanta, Trencin, Rimavska Sobota, Velky Krtis, Zvolen, Kosice, Presov, Svidnik, Bardejov, Michalovce, Trebisov, Vranov, Humenne, and sporadically also the districts of Trnava, Topolcanv, Dunajska Streda, Lucenec, Prievidza, Ziar on Hron, Zilina and Povazska Bystrica could be attacked.

In no case is a harmful occurrence of cabbage aphid expected in the districts of Martin, Liptovsky Mikulas, Banska Bystrica, Poprad, Roznava.

It is recommended to watch the intensity of growths attacks in the endangered districts. When over 10 percent of inflorescence are attacked by colonies of cabbage aphid, a treatment should be carried out immediately after the blooming period of rape is over. In most cases it is sufficient to treat just the borders of growths, applying Pirimor DP, S1 58 EC, etc.

Fall Webworm--Hyphantria Cunea

The prognosis was achieved on the basis of tracing the development of larvae of the pest's second generation in last year, and of its areal spreading on fruit and decorative trees. In this year's vegetation we count on the following occurrence of the first generation:

A slight occurrence is expected in localities of the southern districts in western and eastern Slovakia. Under optimum conditions in the spring months also localities with a medium occurrence can be expected, even a heavy occurrence may take place on primary hosts in the districts of Galanta, Dunajska Streda, Nove Zamky and Komarno. A sporadic occurrence of imagoes may be expected also in the remaining southern regions.

As a rule, the second generation is more numerous and also causes heavier damage. Its spreading and intensity is considerably influenced by weather conditions. Warm and dry weather supports the spreading and harmfulness of fall webworm. When fighting this pest, it is recommended to cut down cocoons of larvae of the first and second growth grade. In addition, chemical spraying is to be carried out in localities with a medium to heavy occurrence. It is possible to use preparations Metation E 50, Anthio and others according to the List of Permitted Preparations for Plant Protection. The most effective interference with the pest involves a combination of mechanical and chemical treatment in the period of maximum occurrence of the youngest larvae.

Hyplodiplosis Equestris

The pest's prognosis was determined on the basis of exact counts and the 1982 chart records.

A medium to heavy occurrence is expected in the districts of Martin, Povazska Bystrica, Zilina, in the eastern part of the Stara Lubovna district, and in the northern and western parts of the Presov and Bardejov districts, respectively. A slight to medium occurrence is assumed in the districts of Banska Bystrica, Cadca, Dolny Kubin, Zilina, Liptovsky Mikulas, Bardejov, Presov, Svidnik, Trebisov, and also around the localities of heavy occurrence. A slight occurrence is expected in other districts, where last year there was recorded a sporadic to slight occurrence, and also in the vicinity of localities with an assumed heavy to medium occurrence.

The intensity of the pest's occurrence is considerably affected by the development of cereals and by weather conditions. It is mainly the growths of spring barley, winter wheat, and to a lesser degree those of winter barley and rye which will be endangered. In the process of vegetation in the endangered region there will be a framework signalization issued by the inspection of KOR UKSUP. According to the current methodology for detailed tracing of the imagoes' fly-out and egg-laying, the actual protection in individual localities has to be performed by agricultural enterprises and by district organization agricultural managements.

Gall Midge--Contarinia Medicaginis

The prognosis was worked out on the basis of the number of larva cocoons in soil samples.

A heavy occurrence is expected in the middle part of the Komarno district, in the eastern part of the Dunajska Streda and Galanta districts, and in the western, northern and middle parts of the districts Nove Zamky, Trebisov, and Michalovce, respectively. The following are the districts with an expected medium occurrence: the northern part of Topolcany, the eastern part of Bratislava, the southern parts of Trnava and Nitra, the remaining parts of Dunajska Streda, Galanta, Nove Zamky, the southern parts of Levice and Michalovce, the adjacent part of Trebisov, and the northern part of Vranov. A slight occurrence is expected in the remaining regions. However, under favorable weather conditions for the pest in the spring and summer months (sufficient warmth and humidity) this slight occurrence can grow into a harmful one, especially in localities adjacent to the regions with a prognosticated medium and heavy occurrence. Also a reverse situation can take place, namely that the regions with forecasted medium and heavy occurrences might not necessarily be damaged by an attack on all of their seed growths, due to inclement weather conditions, or to the agrotechnical measures taken.

Chemical treatment of alfalfa seed growths is to be applied mainly in the region with a forecasted heavy occurrence, and in case of favorable weather conditions also in regions with an expected medium occurrence. Growths should be sprayed at the time of the maximum putting forth green flower buds, especially those areas where gall midges occurred also at the first reaping. The areas left to seed from the first reaping should be treated only in the region with a forecasted heavy occurrence, and only in case when the weather during April and May is going to be favorable for the pest, that is warm and humid. Preparations Metation E 50, Metation P 5 and Soldep can be recommended.

Dasineura Ignorata

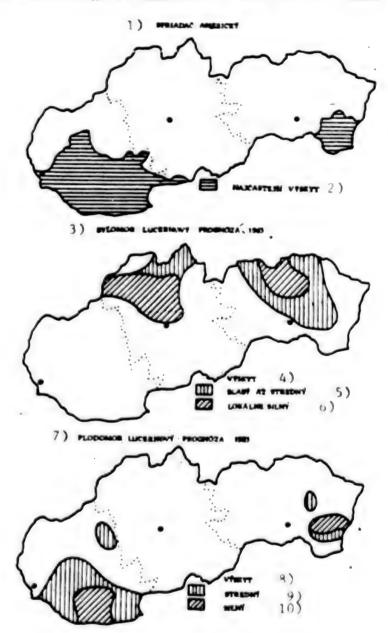
The pest prognosis was achieved on the basis of soil samples analyses with special regard to hibernating stages.

A heavy occurrence is expected only in the middle and northern parts of the districts Michalovce and Vranov, respectively. --In the rest of the alfalfagrowing regions only a slight occurrence is expected.

The protection of seed growths is aimed at the second reaping, being conducted according to the occurrence of Dasineura ignorata shells in the first reaping. In the second reaping a treatment should be applied to those growths where more than 1.5 of shells per 1 stalk in average were counted before the first reaping came to bloom. In the region for which a heavy occurrence was forecasted the first treatment is carried out at a 20-25 cm height of the growth, and the second one 10 days later. Metation E 50 can be used.

Spinach Leat Miner--Pegomyia Hyoscyami

The prognosis was elaborated on the basis of the number of puparia in the soil during the sugarpeet harvesting period. Due to a small number of puparia in the soil a slight occurrence is expected in most localities. Consequently, the protection measures should be taken selectively, in accordance with the Methodological Handbook of MPVz SSR for Plant Protection.



Kev:

- 1. Fall webworm
- 2. Most frequent occurrence
- 3. 1983 prognosis for Dasineura ignorata
- 4. Occurrence
- 5. Slight to medium

- 6. Locally heavy
- 7. 1983 prognosis for gall midge
- 8. Occurrence
- 9. Medium
- 10. Heavy

9910

THREAT OF GRASSHOPPER DAMAGE REPORTED

Abidjan FRATERNITE MATIN in French 2 Mar 83 p 11

[Article by Hien Solo: "Fighting the Stinking Grasshoppers"]

[Text] One might think the gods simply have it in for the peasants of Indenie. First a good part of their crops were destroyed by fire and drought, and now what is left is being attacked by the stinking grasshoppers. They are destroying the banana leaves, the manioc leaves, the coffee leaves, and completely sapping productivity.

Imagine peasants whose annual income has already been substantially reduced bearing the onerous expenses of fighting these creatures that are annihilating their crops. Yet this is what is happening, for the locusts have already made their appearance at Abengourou. They are devouring everything in their path.

The stinking grasshoppers are hard to destroy. In general they disappear in April, after the females have deposited 2 to 5 layings of several dozen eggs each in the ground. The eggs may remain there for 5 to 6 months. In the middle west, the south and the east the eggs hatch between August and October.

The females lay their eggs en masse in "nest boxes" situated in the shade of bushes.

Most of the eggs hatch over a 2-month period. The young larvae are gregarious and stay close together in small spaces (several dozen square meters) on the site of the "nest box" or in the immediate vicinity. This gregarious phase lasts 1-1/2 to 2 months after the first hatchings, and densities can reach several thousand per square meter.

The young larvae devour the leaves without touching the leaf-ribs, which gives their ravages a characteristic appearance, one that might be called "leaf lacework."

They do not attack the agricultural crops (manioc, bananas, pineapples, plums,

coffee trees, etc...). The damage is wrought by larva when they are a little older, and by the winged adult.

At a certain point the larvae become less gregarious and disperse, primarily in order to look for food, and so naturally the surface area infected increases. Several dozen square meters of young larvae can grow into an invasion force big enough to take on a hectare of crops.

The older larvae and the winged insects gather atop the cultivated natural vegetation starting at 1630-1700 hours and remain there until around 1000 hours on the following day, or later under special weather conditions (cloudy sky, cooler temperature). In the heat of the day the larvae shelter themselves from the sun under a leaf, behind a stalk or in the bushes, and are therefore much more difficult to spot.

Recently the locusts have been seen everywhere in Indenie: at Amelekia, Yakasse, Sankadiokro, Ebilassokro, etc...

Under these conditions, a general campaign is both infeasible and uneconomic. And the experts think that only a preventive campaign focused closely on the threatened crops offers hope of overcoming the problem at the least cost and reducing the damage to an acceptable level.

The same experts think that the campaign must be waged by the peasants them-selves.

A campaign to inform the peasant masses with the aid of audio-visual tools (radio, television) and farmer cooperation is absolutely indispensable. "the peasant must be convinced that preventive efforts to destroy the small concentrations of young larvae on the fringes of his cropland will enable him to destroy the locusts that sooner or later will invade his crops with less insecticide and less effort."

According to a technical memorandum drawn up by SATMACI [Technical Assistance Company for the Agricultural Modernization of the Ivory Caost], in order to avoid the need for repeated crop treatments, it is advisable not to apply the preventive treatment until about 1-1/2 to 2 months after the first hatchings, when the majority of larvae are still quite young. In general, when the majority of larvae reach an overall length of just under 2 centimeters the dispersion is about the begin. Of course, the peasants do not understand any of this, and they must be helped to understand.

Keep the Peasants Regularly Informed

In order to tell when hatching began, it is essential in every area to locate several "nest boxes" while it still has all its eggs unhatched. This disturbs Mr Ano, an Amelekia grower who believes that "these nest boxes cannot be kept under regular surveillance as is prescribed by the SATMACI officials."

Before applying the treatment, the experts say, it is essential that the peasant go out in the morning to tour his fields and the adjacent areas in

order to spot the places where the larvae are concentrated (the larvae are perched atop the vegetation in the mornings and thus are clearly visible). Small atomizers—simple, durable and inexpensive—are perfectly suitable, it seems. But here again there will be costs to be borne, and the growers say it is more than they can afford. They are probably right. But do they have an alternative solution? Meanwhile, then, the peasants can go to SATMACI officials for more information.

But we point out that under current conditions fewer and fewer peasants are going to enjoy an easy life, unless one can expect that the party's policy of aiding the peasantry will enable all their problems to be solved.

9516

FUNDS FOR BATTLE AGAINST PADI PLAGUE

Singapore THE STRAITS TIMF in English 26 Apr 83 p 15

[Text] The Agriculture Ministry is to spend \$10 million in an effort to rid several states of a padi plague.

The disease--transmitted by the green leaf-hopper--is affecting padi plants in Perlis, Kedah, Penang and Perak, Bernama reported.

Agriculture experts said that the disease hit almost 14,000 hectares of padi in these areas in the first season last year, and losses have been estimated at \$50 million.

Three years

The Agriculture Ministry's director of crop protection, Mr Talib Majid, said that if the pest were not checked, it could result in losses of about 460,000 tonnes a season or nearly \$290 million worth of crops a year.

He said the campaign to get rid of the pest would last three years.

Mr Talib said that the disease was first noticed in the 1960s but its widespread effects became apparent only last year. He cited unsystematic pest control as one of the factors leading to the current outbreak.

Other reasons included inadequate staff for pest forecasting and surveillance programmes and insufficient funds for pesticides.

A surveillance and forecasting system has been set up in Perlis, Kedah, Penang and Perak and about 70 casual labourers would be recruited.

A mobile nursery will also be used to detect the presence of the padi virus and extent of activity of the green hoppers.

Malaysia produced about 1.4 million tonnes of padi last year but had to import from Thailand, the Philippines and China because demestic consumption reached nearly 1.67 million tonnes.

CSO: 54007.416

CHIAPAS: MEDFLY DETECTED -- The recently detected presence of the dangerous Mediterranean fruit fly has caused justified alarm among the region's argriculture producers. The fly threatens to spread throughout the entire zone and wipe out the fruits that are produced here and that constitute the farmers' livelihood. In fact, it has been learned unofficially that the dangerous plague has already been sighted in the municipalities of Siltepec, El Porvenir, Bejucal de Ocampo, La Grandeza and Motozintla, provoking anxiety among fruit farmers, who are already calling upon the responsible authorities to act quickly to prevent the Mediterranean fruit fly's spreading into other municipalities. It is known that the Department of Agriculture and Water Resources (SARH) is quietly taking action, using the tactic of enticement, but this, according to the farmers, is an ineffective method, since it consists of turning sterile flies loose from little bags in a certain infested area, so that the fertile flies will be wiped out, and only 80 men have been assigned to this task and they are working on the fringes of the area where the dangerous p gue has been detected. The small producers are already suffering unspeakably, since their harvests--principally of oranges and other fruits that they pick at this time of year--are threatened. The rest of the farmers in the surrounding area are also in the throes of anxiety, because, if the SARH does not take immediate and effective action, the Mediterranean fruit fly will wipe out fruit farming not only in our state but also in nearby areas, the work of the 80 men assigned by the SARH being insufficient to halt the fearful plague. [Text] [Tuxtla Gutierrez LA VOZ DEL SURESTE in Spanish 19 Mar 83 pp 5, 8] 2336

TABLE T ERADICALISM EXPERIMENTS REPORTED

man har The STA in 1 , lish 25 Apr 83 p 10

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1. 65 [

In the face of warnings by the World Health Organisation against a possible new wave of sleeping sickness. Nigeria, with the help of the International Atomic Energy Agency (IAEA), has mounted its most extensive eradication programme using nuclear techniques.

Writing in UN Development Forum, Gamini Seneviratne says the tsetse fly and its parasites, trypanosoma, are peculiar to a broad belt of Equatorial Africa.

Control methods used so far have been environmentally damaging, expensive and only temporarily effective. They have included forest clearance and systematic elimination of large game animals.

The World Health Organisation said in December last year: "Many foci that were regarded as extinct have become active again and the epidemic outbreaks recorded in the last two years in the Cameroon, the Ivory Coast, Kenya and Uganda are a sign that this disease is returning in force"

Possibly the most promising of several recent testse eradication systems is the Sterile Insect Technique (SIT) developed by the IAEA. The technique consists of breeding large numbers of insects, rendering them sexually impotent by exposure to a dose of nuclear radiation and releasing them into their natural habitats.

Among the available or theoretically possible new options are a variety of traps and tsetse specific biological methods. None of these seems to be applicable on a truly large scale as SIT could possibly be and most promise temporary control rather than eradication.

The Nigerian project is in a segment of a 10 000 sq km area now uninhabited because of the fly but already earmarked for development — the Lafia Agricultural Development Project — for which the Nigerian Government and the World Bank have committed funds.

Says the author "Every future tsetse eradication effort would, it is reasonable to expect, be linked with a specific development plan."

"Whether the method adopted will be the Sterik Insect Technique, may well be decided on whether or not Nigeria shows it to be economically and environmentally the best option We should know by the end of 1984."

RECENT SITUATION REVIEW--During the past week various regions concentrated on fertilizing and weeding their ricefields. The General Statistics Department reported that by mid-April, northern provinces carried out the second phase of weeding on 883,000 hectares of ricefields, representing 84 percent of crop areas, and the third phase of weeding on 485,000 hectares, representing 44 percent of crop areas. They are still inspecting their fields for timely detection of harmful insects and to classify their rice by quality so as to map out fertilization plans. Only some 85,000 hectares of ricefields are now affected by harmful insects. In livestock breeding, pockets of epidemics among pigs have been stamped out. Of concern is the spread of diseases among cattle that have killed many oxen, cows and buffaloes. The Veterinary Department of the Agriculture Ministry is making every effort to stamp out the diseases. [OW240947 Hanoi Domestic Service in Vietnamese 1100 GMT 21 Apr 83]--Reports from 13 provinces say there are now about 97,000 hectares of rice pestravaged rice, with Binh Tri Thien, Thanh Hoa and Nghe Tinh the most affected provinces. Regarding stockbreeding, the intensity of the pockets of contagion affecting hogs and cattle in Thanh Hoa has subsided. In Hai Hung, buffalo pasteurellosis has appeared in the districts of Cam Binh, Nam Thanh and My Van, affecting more than 300 buffalo. [OWO40327 Hanoi Domestic Service in Vietnamese 1100 GMT 30 Apr 83]

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